

# Uses of digital technologies by migrants from Haiti and to Brazil



## AUTHORS

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## ABSTRACT

This working paper is the fourth in the series produced as part of the output of Work Package 9 on technology, inequality and migration within the MIDEQ Hub, a multi-disciplinary research project in 12 countries of Latin America, Africa and Asia, including the Haiti-Brazil migration corridor. It presents the results of three iterations of an online survey totalling 372 respondents most currently living in Brazil, and mainly from Haiti; 92.7% of those who reported their status identified themselves as migrants, with the remainder being family members of migrants (5.5%) or returned migrants (1.8%). Following a summary of the methodology, which explains the impact of COVID-19 on our research practice and why an online survey was used to replace our originally planned interviews and focus groups, the paper provides an overview of the most important results and an exploratory data analysis, focusing on the potential influence of age, gender, countries of origin, migration status, and occupational status on the ways in which respondents use digital technologies and for what purposes. Three important conclusions for the subsequent stages of our research on the inequalities associated with migration and how digital tech may be used to reduce these are: first, the migrants responding to this survey are from very different backgrounds, and these differences have a strong influence on their use of digital tech; second, many migrants aspire to use digital tech for purposes that they could readily do if they knew how; and third, none of the migrants specifically identified inequality or equity as issues that they would like to use digital tech to address.

## KEY FINDINGS

**1. Context matters:** groups of migrants from different countries and backgrounds use digital tech in varying ways and for different purposes. There is no such thing as one size fits all.

**2. Many migrants aspire to use digital tech for educational and employment purpose** – yet these are things that digital tech could already be readily used for if they knew how.

**3. Most migrants focused on the use of digital tech for increasing economic well-being** – none specifically addressed their potential for reducing inequalities.



## Introduction<sup>1</sup>

This is the fourth in a series of working papers presenting the initial findings from research conducted by Work Package 9 (WP9) of the UKRI GCRF funded MIDEQ Hub<sup>2</sup> into how migrants use digital technologies. It focuses mainly on migration between Haiti and Brazil (in contrast to the previous working papers that summarised our research in Nepal, Malaysia and South Africa<sup>3</sup>), and has been conducted collaboratively between WP9 and MIDEQ's country lead institutions, The Interuniversity Institute for Research and Development (INURED) for Haiti and the Instituto Maria e João Aleixo (IMJA) in Brazil, as well as with the Organização Internacional para as Migrações (OIM; in English IOM) in Brazil. WP9 is one of three "intervention" packages within MIDEQ<sup>4</sup> and has the overarching objective of facilitating the crafting of a digital intervention (or interventions) that will contribute to reducing inequalities associated with migration between and among a selection of the 12 countries chosen for study by the MIDEQ leadership in Africa, Asia and Latin America.

### A three-phase approach

We have adopted a three-phase approach to deliver our overall objective of facilitating the development of digital interventions by migrants and local tech developers that may improve the lives of migrants and their families. It is designed explicitly to learn from and work with migrants and local tech developers to craft an intervention of their choosing. The *first phase* of the research (2019-21) aimed to understand better how migrants currently use digital technologies. Originally, this was intended primarily to be undertaken through interviews, focus groups and other qualitative methods in four of the MIDEQ migration corridors (China-Ghana, Ethiopia-South Africa, Haiti-Brazil, and Nepal-Malaysia). However, the onset of the COVID-19 pandemic prevented us from undertaking this field research, and we consequently responded flexibly by developing online surveys during 2020 and 2021 that have provided the evidence for this working paper (see next sub-section). We are now also undertaking online interviews and discussions with the support of country lead teams in Brazil, Ghana, Malaysia, Nepal and South Africa to try to gain additional perspectives through qualitative research methods.<sup>5</sup> The *second phase* (2021-22) is exploring further how migrants understand the notion of inequalities associated with migration, what they might like to change, and how digital technologies might be able to effect such change. This phase uses interviews and focus groups

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<sup>1</sup> Much of this introductory section and methodology is shared with the introductions to our other working papers based on the online surveys, because we used the same approach and methodology in all of them. It is repeated here, though, so that this paper can also be read on a stand-alone basis, and it also includes material specific to our work in Brazil and Haiti.

<sup>2</sup> MIDEQ is funded by the [UK Research and Innovation \(UKRI\) Global Challenges Research Fund \(GCRF\)](#) and is a five year project (2019-2024) with an ambitious aim to transform understanding of the relationship between migration and inequality in the context of the "Global South" by decentering the production of knowledge about migration and its consequences away from the "Global North" towards those countries where most migration takes place. [Work Package 9](#) is led by staff within the UNESCO Chair in ICT4D at Royal Holloway, University of London. These Working Papers present the findings of online surveys conducted in 2020 and 2021, and material on the context and methodology is broadly similar in all of the papers, although the results and analysis vary.

<sup>3</sup> Unwin, T., Ghimire, A., Yeoh, S-G., New, S.S., Kishna, S.S., Gois, W., Lorini, M.R. and Harindranath, G. (2021) [Uses of digital technologies by Nepali migrants in Malaysia](#), Egham: UNESCO Chair in ICT4D, Royal Holloway, University of London, Working Papers No.1; Unwin, T., Ghimire, A., Yeoh, S-G., Lorini, M.R. and Harindranath, G. (2021) [Uses of digital technologies by Nepali migrants and their families](#), Egham: UNESCO Chair in ICT4D, Royal Holloway, University of London, Working Papers No.2; and Unwin, T., Garba, F., Musaba, M.L., Lorini, M.R. and Harindranath, G. (2021) [Uses of digital technologies by migrants in South Africa](#), Egham: UNESCO Chair in ICT4D, Royal Holloway, University of London, Working Papers No.3

<sup>4</sup> The other work packages focus explicitly on sectoral themes such as gender, childhood, intermediaries, and access to justice. The other two intervention packages are on political mobilisation and access to justice.

<sup>5</sup> The results of this qualitative research will be reported separately.

(both online and in person) to combine migrants' understandings of migration inequalities with the digital experiences of colleagues within the work package, and thereby to identify where digital tech might be able to be used to reduce inequalities. The *third phase* is to facilitate interactions between local tech developers and migrants through a series of workshops and sandpits (in Nepal beginning in September 2022 and South Africa beginning in November 2022) with the intention of crafting one or more digital interventions that might help reduce the identified inequalities.

### **The impact of COVID-19 on Phase One of our research and practice**

The qualitative empirical field research required for the first phase was meant to have taken place in 2020 and early 2021, and was to be undertaken collaboratively in-country with the MIDEQ lead teams therein. However, this proved to be impossible as a result of travel restrictions associated with the global COVID-19 pandemic, which not only had serious implications for migrants across the world, but also prevented any research visits. Furthermore, the UK government dramatically cut funding to the UKRI GCRF in an effort to use these savings to support its own response to COVID-19. This led to the formal suspension of WP9 within MIDEQ. However, Royal Holloway, University of London generously stepped in to provide one year's funding to cover the costs of employing a post-doctoral researcher following the cessation of MIDEQ funding to the work package.

WP9 responded by adopting a creative and flexible approach to these challenges, and developed an online survey instead of conducting the previously planned qualitative work (see methodology below). This produced a very different kind of data to that originally anticipated, but it did also have a range of unanticipated advantages.

### **The Haiti-Brazil migrant corridor**

The Haiti-Brazil corridor is one of the six where the MIDEQ Hub has been conducting research since 2019.<sup>6</sup> In recent years, Haiti has been the origin for one of the largest groups of officially registered migrants in Brazil, alongside those from Bolivia, and most recently Venezuela which currently tops the list of countries of origin for immigrants to the country.<sup>7</sup>

Haiti has long been a country of net emigration with about 11% of the population being estimated to live outside the island (OCDE/INURED, 2017).<sup>8</sup> Many factors have influenced Haitian emigration including poverty, and political and human rights violations dating back to the Duvalier dictatorship and even earlier in the 20th century. Traditionally, the USA was the most popular destination for Haitian migrants, and it is estimated that in 2020 it accounted for around 40% of all Haitians living overseas (Yates, 2021). Following the 2010 earthquake in Haiti, however, Brazil became an increasingly popular destination for Haitian emigrants, although much of this has been as a transit stop on the hoped-for route to other countries in Latin America such as Chile, French Guiana, Ecuador, Colombia, Argentina and Mexico (IOM, 2014). Wejsa and Lesser (2018, unpaginated) thus note that "Following the 2010 earthquake in Haiti, Brazil granted humanitarian visas and permanent residency to roughly 98,000 Haitians, though some 30,000 have reportedly since relocated due in part to Brazil's economic recession". As the MIDEQ briefing note on the Haiti-Brazil corridor observes, "migration processes of Haitians in Latin America are less characterized by dispersal from a homeland and resettlement in a host country as it is by onward migration and re-settlement".<sup>9</sup> This report also notes that most of the Haitian migrants circulating in the Haiti-Brazil corridor are young males between 18

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<sup>6</sup> <https://mideq.org>

<sup>7</sup> <https://www.nepo.unicamp.br/observatorio/bancointerativo/numeros-imigracao-internacional/sinre-sismigra/>

<sup>8</sup> This section is based largely on the MIDEQ corridor brief available at <https://www.mideq.org/en/migration-corridors/haiti-brazil/>.

<sup>9</sup> <https://www.mideq.org/en/migration-corridors/haiti-brazil/>.

and 35 years old, some of whom bring their girlfriends and wives, whilst others leave them behind in Haiti.<sup>10</sup> Nevertheless, recent economic instability and a rise in xenophobia and anti-immigrant feelings have meant that Brazil has now become a less popular destination for Haitians, with their place instead in part being taken by Venezuelans escaping the economic and social crisis in their home country (Uebel, 2018; Shamsuddin *et al.*, 2021, UNHCR, 2022).

## Methodology

Online methods including surveys, interviews and discussions were used between 2020 and 2022 to try to gain at least some data for Phase One, in place of the qualitative face-to-face research that we had originally intended but could not undertake because of COVID-19. In essence, we designed short online surveys in different languages for each country and our MIDEQ partners and others within our networks assisted by disseminating the links to these surveys to migrants and migrant organisations.<sup>11</sup> The advantages and disadvantages of such an approach to the use of digital technologies are summarised briefly in Table 1 below.<sup>12</sup>

Table 1: Advantages and disadvantages of an online survey approach

Advantages of an online approach	Disadvantages of an online approach
<ul style="list-style-type: none"> <li>• Feasible in a context where travel and on the ground field research are impossible</li> <li>• The research focus is on the use of digital tech by migrants, and so migrants who were using digital tech should be able to respond</li> <li>• Enables many more people to respond than would have been possible through originally planned qualitative methods</li> <li>• Anyone with access to the digital link could complete the survey, and so survey could include respondents not just from the MIDEQ corridor countries</li> <li>• Reduces the impact of variable researcher influence on respondents' answers to the questions</li> </ul>	<ul style="list-style-type: none"> <li>• Some people may have reservations about completing online surveys for reasons such as security, uncertainty about the use of such technologies, or lack of confidence.</li> <li>• Does not enable the richness of in-depth discourse available through qualitative research.</li> <li>• Focuses mainly (but not exclusively) on closed questions that may constrain respondents' answers</li> <li>• Little control over exactly who answered the questions – reliant on partners' decisions about sampling</li> <li>• Costs of air-time may act as a disincentive for some to complete the survey.</li> </ul>

## Design approach

We were driven by seven overarching principles in developing the online survey to be used in all the MIDEQ corridors where we are undertaking research:

- It should be as short as possible, so that migrants would not need to spend much time in its completion;
- It should be in relevant languages, so that it can be readily understood by migrants;

<sup>10</sup> For a more detailed review of recent literature on Haitian migrants in Brazil, see IMJA (2022) *Dados do survey sobre migração Haitiana no Brasil: primeiro relatório global*, Rio de Janeiro: IMJA and MIDEQ.

<sup>11</sup> This has subsequently been supplemented through the use of online interviews and focus groups in the latter part of 2021 and early 2022. These provide a valuable alternative mainly qualitative approach to the predominantly quantitative data analysis presented in this working paper. Ultimately both these types of data will be combined with the responses to questions posed in the overarching MIDEQ survey undertaken on the ground in all corridor countries.

<sup>12</sup> The focus of our research was explicitly on exploring the views of those who use digital technologies, and the use of an online survey was therefore particularly appropriate, since it provided an indication of respondents' familiarity with the technology. However, the survey also included questions for those who did not use such technology, with the option to have someone help them complete it.



- The questions should be framed together with our partners;
- It should be easy to use and as accessible as possible for mobile devices;
- It should focus very clearly only on the basic theme of how migrants and their families are currently using digital technologies;
- Each survey should have its own appealing identity, using the logos of the partners involved in disseminating the links together with a colour scheme relevant to the context; and
- It should be uniform in structure and content across all the countries where we are researching.

The main survey designs for Haiti and Brazil are shown in Figure 1, and as with most of the surveys, the colours chosen were based mainly around those used in the national flags.

Figure 1: Main survey designs for use in Brazil and Haiti



### Partner involvement and survey design

Colleagues in partner countries throughout MIDEQ were invited to contribute to the overall design of the surveys. Our first online surveys were undertaken in Malaysia and Nepal, and once the basic structure and questions had been agreed for these it was essential that they remained the same across all of the subsequent surveys so that responses could be compared between countries and across the entire MIDEQ portfolio.

### Structure and questions

The survey has five basic sections, following an introduction that briefly summarises its purpose, and emphasises that all the responses are treated strictly anonymously. We deliberately wanted to ensure that there was no way that we could trace the identities of any of the migrants who responded.

- The first section asks whether or not the respondent uses digital technologies, and depending on the response (yes/no) directs them through two different routes.
- For those who answer no, there then follows a section about why they do not use digital technologies.
- For those who answer yes (the vast majority in our Haitian and Brazilian case study), the subsequent questions are grouped into two sections: the first asks about how and why they use different types of digital technologies, and the second asks about the apps (applications) that they use.
- Both groups of respondents are then invited to provide some basic socio-economic information about themselves for the purpose of analysing their previous responses. This section comes last because we do not wish to put migrants off in any way by

appearing to ask personal questions before answering the substantive questions in which we are really interested.

Most of the 19 questions asked were in the form of two-dimensional matrices in which respondents were asked to check a box indicating, for example, the frequency with which they used a particular type of technology (annually, monthly, weekly or never). However, where relevant, the questions also provide respondents with the opportunity to tick a box for “other” and provide further text-based responses. These responses often proved to be quite extensive and were very helpful in providing further insights about migrant use of digital tech.

The personal information that respondents were invited to contribute consists of:

- Whether they were a migrant living overseas, a returned migrant living in the home country, or a family member of a migrant.
- The country in which they were born (drop-down menu).
- The country in which they are now living (drop-down menu).
- Length of time living in the country where they now are (drop-down menu).
- The country where they consider their home to be.
- Their age.
- Their gender.
- Their current employment status (part- or full-time, in formal or informal sector, or not working).

These categories provided the basis for the subsequent exploratory data analysis of the responses in this report.

The choice of options as possible responses to specific questions in part drew on existing literatures on technology use by migrants, and also on the suggestions made by our partners in the early stages of the research design across all of the countries where we were working. Nevertheless, for the sake of simplicity and time, we sought to limit the total number of options in any one question to around ten, although the question on what uses are made of specific devices (mobiles, tablets, laptops and desktops) stretched to 14 optional responses.

It was particularly difficult to agree on a set of generic apps that migrants might use that would be relevant across all countries. Ultimately 11 options were agreed, based on data (all for 2019) about the worldwide usage of different apps. Interestingly, sources using different measures of app use are not consistent in their rankings, and so difficult judgements had to be made about what to include.<sup>13</sup> We were keen to use apps developed in both China and the USA (in Chinese and in English), given the strong influence of Chinese technologies in some of our countries of interest. The final list of apps chosen is shown in Table 2, and respondents were also able to list any other apps that they used more frequently than those mentioned in this table.

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<sup>13</sup> Sources used were: <https://www.messengerpeople.com/global-messenger-usage-statistics/>, <https://www.similarweb.com/corp/blog/worldwide-messaging-apps/>, <https://techjury.net/stats-about/app-usage/#gref>, <https://sensortower.com/blog/top-apps-worldwide-q1-2019-downloads>, <https://www.netsolutions.com/insights/top-10-most-popular-apps-2018/>, <https://blog.sagiapl.com/most-used-apps/>, <https://www.appinchina.co/market/apps/>, <https://ltschool.com/chinese-apps/>, <https://www.scmp.com/magazines/style/news-trends/article/2172512/life-china-made-easier-these-top-8-must-download-apps> and <https://www.24hchina.com/chinese-app-store-list/>.

Table 2: Apps selected for respondents to choose from in answering question 10 about usage

	Never	Annually	Monthly	Weekly	Daily
Alipay	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Baidu	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Facebook	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Instagram	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Messenger	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Netflix	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
QQ	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Twitter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
WeChat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
WhatsApp	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
YouTube	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### Choice of platform for distributing and managing the survey

The main platform used for all of our WP9 surveys was the UK academic JISC Online Surveys platform (formerly Bristol Online Surveys),<sup>14</sup> primarily because of our existing familiarity with its design and functionality, but also because it is GDPR compliant, secure, certified to ISO 27001 standard, relatively easy to use, built specifically for research and education, and has sophisticated analytical tools embedded within it, while also enabling easy export of the results for further statistical analysis. The IMJA team used the open-source ODK Collect app and tablet devices to collect the responses to the survey that they facilitated for us, and these were then collated using the OnaData data collection platform (see further details below in section on survey sampling and distribution).<sup>15</sup>

### Survey distribution and sampling

Throughout all of our work during the COVID-19 pandemic, we relied very heavily on our in-country MIDEQ lead partners to facilitate the research on the ground, and encourage migrants with whom they were working to complete the online surveys. When we commenced our research on the Haiti-Brazil corridor, the MIDEQ Brazilian partner was not yet in place, and so we began with a survey in Haiti and with diaspora Haitian migrants (facilitated by INURED), initially in Haitian Creole (launched in August 2020) but then also subsequently in English (launched in September 2020); both surveys were closed in April 2022. The difficult political circumstances (including the assassination of President Jovenel Moïse in April 2021) alongside the damaging environmental disasters (Hurricane Laura in August 2020 and the earthquake in the south-west of the country in August 2021) and the effects of the COVID-19 pandemic have made field research in Haiti extremely difficult, and only 49 responses to the survey were therefore obtained.

In the absence of a formal Brazilian MIDEQ partner at the time, we approached IOM in Brazil and they very generously agreed to help distribute the survey. At their suggestion we prepared this in Brazilian Portuguese, Creole, English and French, and it was launched in June 2021 and closed in December 2021 (total number of responses, n=130). Subsequently IMJA was confirmed as the Brazilian MIDEQ partner, and we created a new version of the online survey to show their logo, keeping all of the questions the same, and prepared in both Brazilian Portuguese and Creole. This was also made available online in June 2021 to gain any additional

<sup>14</sup> <https://www.onlinesurveys.ac.uk/>.

<sup>15</sup> <https://getodk.org> and <https://ona.io>

responses and closed along with the other surveys in April 2022. However, our colleagues in IMJA recommended that better responses would be received from the migrants if IMJA researchers completed these surveys face to face with them as part of their ongoing field research, and then recorded the data in a spreadsheet.<sup>16</sup> This was therefore the way in which all of these responses were obtained. In total, 283 responses were gained in this way, but 32 of these were invalidated by the IMJA team, leaving a total of 251 responses. The WP9 team then uploaded all of the 251 responses in the spreadsheet individually into the online survey so that they could be completely anonymised. During this process of uploading the data it became apparent that there were some anomalies in the ways that different research assistants had interpreted the questions and recorded the results on the spreadsheet. After detailed discussion and preliminary analysis of the data with our IMJA colleagues we agreed together that a further 58 responses should be removed from the analysis, leading to a final data set of 193 respondents overall.

Online surveys have the distinct advantage for data gathering from those respondents who are able to use them<sup>17</sup> in that there is no differential interviewer or enumerator bias, and any bias that may be introduced by the style of the survey will be relatively uniform across all the countries and contexts where we are working. It is likely that cross country comparisons will be more robust using a consistent online approach than if different methods had been used to gain the data in every country. It is, though, impossible to tell with certainty whether the data produced by the IMJA-supported survey is directly comparable with the results from the other online surveys that we have undertaken, because it is the only country where researchers actually asked the respondents face-to-face, rather than using the online survey instrument.

The IMJA-led survey focused exclusively on Haitian migrants, given MIDEQ's focus on the Haiti-Brazil corridor. However, the IOM surveys were in multiple languages and were open to any migrants regardless of their country of origin. This theoretically provides the potential for interesting comparisons about whether migrants coming into Brazil from differing countries may have used digital tech in varying ways. As noted above, the history of migration into Brazil has varied considerably over time, with the latest source of origin just before the COVID-19 outbreak being mainly from Venezuela, rather than Haiti. As discussed further below, this was definitely reflected in the countries of origin of respondents in the different surveys.

Given the different approaches used in gathering the data as well as the different sample sizes, it was decided to summarise the results of each survey (IOM and IMJA) separately, and to include those from Haiti alongside them rather than producing a separate report for country origin and for host country as we did for Nepal and Malaysia.

## Results

This presentation of results for the surveys conducted in the Brazilian and Haitian contexts is divided into three main sub-sections: (i) the sample, (ii) responses on the use of digital devices, and (iii) on the applications that migrants and their families used. Analysis of these results is undertaken in the ensuing section in terms of the socio-economic characteristics of the different migrants.

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<sup>16</sup> Using ODK Collect app and tablet devices to collect the responses and collated using the OnaData data collection platform as noted in the previous section. The questions were uploaded on OnaData in Portuguese, but some surveyors noted the responses in Creole

<sup>17</sup> As noted previously, since the surveys were explicitly intended to be answered by people who used digital tech, it seemed appropriate that they should indeed be done online. We were not intending in this work to find out why people may not have been using tech, although this is itself an interesting issue worthy of investigation.



### The sample

The overall characteristics of the respondents in the samples in each survey are summarised in Table 3 below. The countries of origin of respondents in Brazil are discussed in more detail below, but in interpreting these overall results, it is important to note that 80% of respondents to the online survey mainly distributed by IOM were from Venezuela, whereas all of those whose views were reported by IMJA were of Haitian origin. The differences in responses between these two surveys may therefore reflect in part at least the difference in origin of the two different migrant communities.

Table 3: Summary of characteristics of respondents for Haiti, Brazil IOM, and Brazil IMJA

	<b>Haiti</b> (facilitated by <b>INURED</b> : English n=40, and Creole n=9) <b>n=49*</b>	<b>Brazil</b> (facilitated by <b>IOM</b> : Portuguese n=120, Creole n=2, English n=2, French n=6). Total <b>n=130*</b>	<b>Brazil</b> (facilitated by <b>IMJA</b> : Creole and Portuguese) <b>n=193*</b>
<b>Gender</b>			
• Female	32 (65.3%)	87 (66.9%)	86 (44.6%)
• Male	17 (34.7%)	41 (31.5%)	107 (55.4%)
• Other	0	1 (0.1%)	0
<b>Age</b>			
• <10	0	0	0
• 10-20	1 (2.0%)	5 (3.8%)	2 (1.0%)
• 21-30	8 (16.3%)	38 (29.2)	69 (35.8%)
• 31-40	13 (26.5%)	44 (33.8%)	80 (41.5%)
• 41-50	12 (24.5%)	32 (24.6%)	35 (18.1%)
• 51-60	12 (24.5%)	9 (6.9)	5 (2.6%)
• >60	2 (4.1%)	1 (0.1%)	1 (0.5%)
<b>Occupation</b>			
• Full-time formal sector	35 (71.4%)	43 (33.1%)	70 (36.3)
• Part-time formal sector	3 (6.1%)	12 (9.2%)	0
• Looking for work	4 (8.2%)	33 (25.4%)	67 (34.7)
• Caring for house and children	2 (4.1%)	17 (12.3%)	14 (7.3%)
• Not working; passing through	0	0	5 (2.6%)
• Full-time informal sector	2 (4.1%)	8 (6.2%)	29 (15%)
• Part-time informal sector	2 (4.1%)	13 (10%)	8 (4.1%)
<b>Migration identity/status</b>			
• Migrant living overseas	23 (46.9%)	121 (93.1%)	178 (92.2%)
• Returned migrant	1 (2.0%)	3 (2.3%)	0
• Family member of migrant	19 (38.8%)	2 (1.5%)	0

**Notes:**

\* All percentages in this Table are based on the total number of responses, but not all respondents answered every question and so percentages do not always total 100%.

*Sample size*

The total sample included 372 valid responses completed for the two Brazilian surveys (n=130 for the IOM version and n=193 for the IMJA survey) and the INURED Haitian survey (n=49).<sup>18</sup>

*Age and gender*

Tables 4-6 provide details of the age and gender distribution of respondents in each of the surveys.

*Table 4: Age and gender distribution of respondents who completed the IOM survey in Brazil*

How old are you (n=130) (1 no answer)	What gender do you consider yourself to be?			Totals
	Female	Male	Other	
< 10 years old	0	0	0	0
10-20 years old	3	2	0	5
21-30 years old	25	12	1	38
31-40 years old	32	12	0	44
41-50 years old	21	11	0	32
51-60 years old	6	3	0	9
>60 years old	0	1	0	1
No answer	0	0	0	1
<b>Totals</b>	<b>87</b>	<b>41</b>	<b>1</b>	<b>130</b>

*Table 5: Age and gender distribution of respondents who completed the IMJA survey in Brazil*

How old are you (n=193)	What gender do you consider yourself to be?			Totals
	Female	Male	Other	
< 10 years old	0	0	0	0
10-20 years old	2	0	0	2
21-30 years old	39	30	0	69
31-40 years old	30	50	0	80
41-50 years old	10	25	0	35
51-60 years old	3	2	0	5
>60 years old	1	0	0	1
No answer	1	0	0	1
<b>Totals</b>	<b>86</b>	<b>107</b>	<b>0</b>	<b>193</b>

<sup>18</sup> Not all respondents answered every question and so n is often below 372 (broken down proportionally in the three different surveys). Some questions also offered respondents the opportunity to provide multiple answers, and so n can also be higher than 372 (and likewise proportionally for each of the separate surveys).

Table 6: Age and gender distribution of respondents who completed the INURED Haitian Survey

How old are you (n=49)	What gender do you consider yourself to be?			Totals
	Female	Male	Other	
< 10 years old	0	0	0	0
10-20 years old	1	0	0	1
21-30 years old	5	3	0	8
31-40 years old	9	4	0	13
41-50 years old	7	5	0	12
51-60 years old	8	4	0	12
>60 years old	1	1	0	2
No answer	1	0	0	1
<b>Totals</b>	32	17	0	49

There are three key observations that can be made about these distributions:

- The IMJA survey included more men (55.4%) than women (44.6%), whereas the other two surveys included more women than men (66.9% as against 31.5% for the IOM survey; and 65.3% against 34.7% for the Haitian one). This is in line with the comments noted in the introductory section of this working paper, that men dominate the migrant flow from Haiti to Brazil.
- Across all three surveys the age group most represented were those between 31 and 40 years old, although the Haitian survey had relatively more older people (53.1% over 40) than was the case in the other two based in Brazil.
- In general terms, men and women had broadly similar age distributions in all three surveys, with the number of younger and older respondents declining consistently either side of the mode (31-40 years).

#### Country of origin, residence and home

The countries of origin of respondents varied very significantly between the IMJA survey and the IOM survey in Brazil. All of the IMJA respondents were from Haiti since they are the main focus for MIDEQ’s research on the Haiti-Brazil corridor, whereas 80% of those responding to the IOM survey were from Venezuela, reflecting the recent influxes following the election of President Maduro there in 2013 and the constitutional crisis of 2017. The remaining 20% of respondents to the IOM survey consisted of small numbers from various Latin American countries, but also two people from Syria and one from Malta. Some 59.2% of the respondents to the Haitian survey were unsurprisingly born in Haiti, with 22.4% saying that they were born in the USA, and the remainder not providing a response.

All of the IMJA-facilitated survey respondents were currently living in Brazil, as were 89.2% of the IOM survey; 77.6% of the Haitian survey respondents indicate that they were living in the USA, with one person living in Haiti and one in Canada, and the remainder not giving a response to this question.

The evidence was particularly interesting relating to where people considered their homes to be. In the Haitian survey 48.9% said that their homes were in the USA, but 24.4% still referred to their homes as being back in Haiti. Among the IMJA survey of respondents living in Brazil, a much higher percentage (73.1%) referred to their home as being in Haiti, in contrast to only 25.4% saying that it was Brazil. Some of the responses from Haitians in Brazil reflected a particular poignancy, evidenced by comments such as “*Ayiti cheri lanmou blayi nan kè m pou ou*” (Dear Haiti, the love of my heart for you) or “*Haiti, obviamente*” (Haiti, obviously) although another migrant also commented “*Brasil, muito acolhedor*” (Brazil, very welcoming). This was rather different from the migrants mainly of Venezuelan origin who were in Brazil and

responded to the IOM survey, who were more evenly balanced in their opinions, with 45.4% of them saying that they felt their home was now in Brazil, in contrast to 39.2% who said that it was still in Venezuela.

*Migration status*

More than 90% of respondents to our surveys undertaken in Brazil were people who identified themselves as migrants living overseas. This was very similar to the data from our survey in South Africa, but rather different to the sample based in Nepal in which there were higher numbers of family members and returned migrants.<sup>19</sup> The Haitian survey did though include a high percentage (38.8%) of family members of migrants, mostly living in the USA.

*Duration of migration overseas*

Another interesting feature of the migrant respondents in Brazil and those in the Haitian survey are how different they were from each other. The IOM survey respondents (mostly from Venezuela) were mainly quite recent arrivals, with 52.7% having arrived between 2 and 5 years previously, and another 31.8% arriving between 1 and 2 years previously (Figure 2). In contrast, Haitian respondents to the IMJA survey had mainly been in Brazil for more than 5 years (45.1%), with 35.2% also having been there between 2 and 5 years. The respondent to the Haiti survey were generally the most well-established in their host country, with 83.7% having been there (mainly the USA) for more than 5 years (Figure 4)

Figure 2: Brazil IOM - Length of time spent in the country where respondents are now living

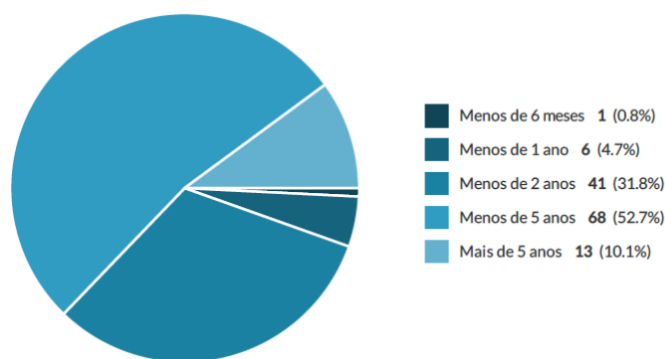
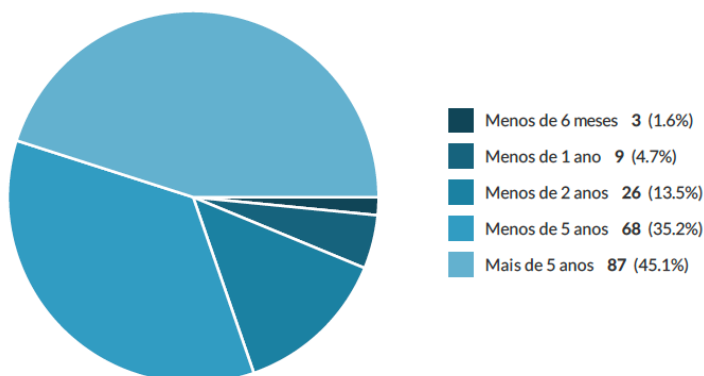
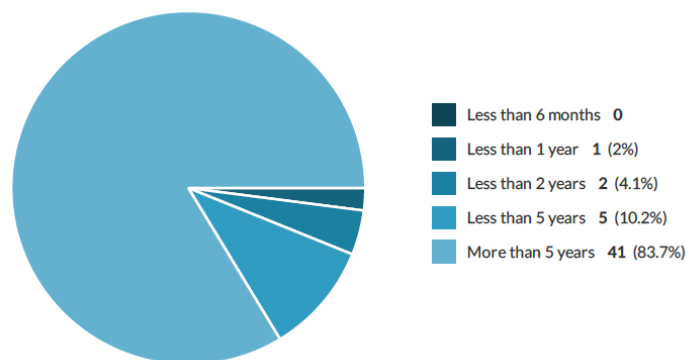


Figure 3: Brazil IMJA - Length of time spent in the country where respondents are now living



<sup>19</sup> See our working papers relating to these other surveys noted in footnote 3.

Figure 4: INURED Haiti - Length of time spent in the country where respondents are now living



This also reflects the differences we have seen in our surveys from other countries. The Haiti survey distribution, for example, is closely similar to that from South Africa where a large majority (88.6%) had been living in their host country for more than 5 years, whereas the IOM respondents are quite similar to the duration distribution of mainly Nepali migrants in Malaysia.

### Occupation

Figures 5, 6 and 7 indicate the different categories of work undertaken by respondents within the samples. The employment characteristics of both the Brazilian samples were quite similar: the largest category in both were those working full time in the formal sector (IOM 34.1%, and IMJA 36.3%). However, both also had large numbers who were not working and looking for employment (IOM 26.2%, and IMJA 34.7%). Somewhat surprisingly, and in contrast to some of our other surveys, the percentages working in the informal sector were quite low in Brazil, with only 16.6% of the IOM respondents and 19.1% of the IMJA respondents reporting that they were in the informal sector. This, for example, is noticeably different from our survey in South Africa, where 48.8% of respondents were working in the informal sector. Another interesting characteristic of these data is that only 2.6% of the Haitian respondents in the IMJA-supported survey (and none of those in the IOM-supported survey) reported that they were not working but moving on to another country. Given the comments above about Haitian migrants treating Brazil as a stop-over on the way to another place, this suggests either that the survey under-reports on this group or that this pattern of movement may not be as widespread as is sometimes argued.

Figure 5: Brazil IOM - Current main employment status of respondents

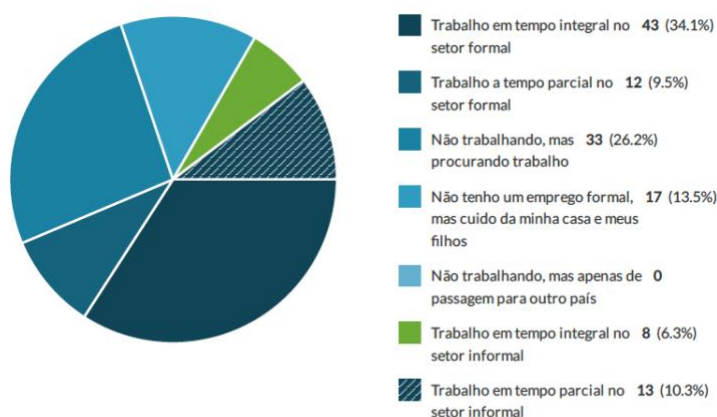
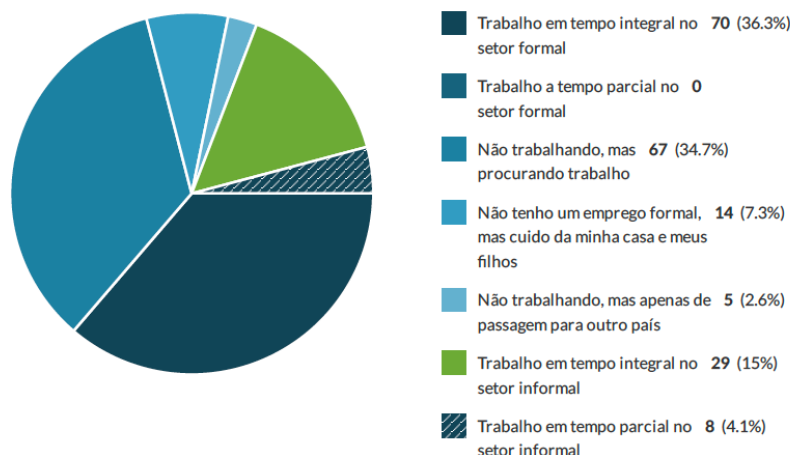


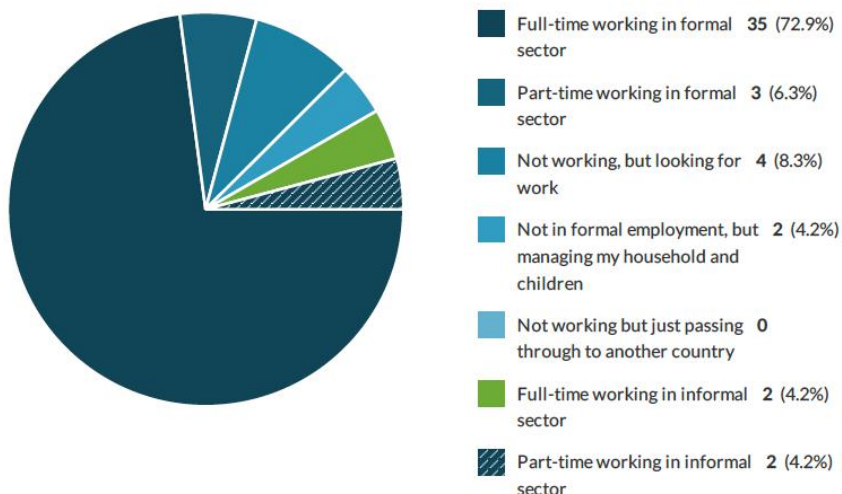


Figure 6: Brazil IMJA - Current main employment status of respondents



The INURED Haiti survey data (Figure 7) reflects a very different distribution, with 79.2% of all respondents reporting that they were in full-time work. Taken together with the figures for the length of time these respondents had been in their destination country (mainly the USA), this suggests that the Haitian respondents were a rather different and more mature group, who had been away from Haiti for longer, and had established themselves, mainly full time, in formal work, whereas those in the other two surveys based in Brazil were more recently arrived, and many of them were still seeking employment.

Figure 7: INURED Haiti - Current main employment status of respondents



### Diversity and context

The above account of the character of the respondents from the three different surveys suggests that they represent three rather different populations: relatively recent migrants to Brazil, mostly from Venezuela, with around 44% in full time work, but also some 26% out of work and looking for work (the IOM facilitated survey); mostly more established migrants from Haiti, with almost 35% out of work and looking for work (the IMJA facilitated survey); and well-established migrants from Haiti, many in the USA, almost 80% of whom were in formal employment (the INURED survey). The paper had originally been intended to combine all of these surveys into a single overall composite picture, but in the light of these differences, each is analysed separately below

### Usage of digital technologies by respondents

The above summary indicates that the sample was quite diverse, including both women and men, of different ages, from different backgrounds, and with different migration experiences and destinations. The implications of the impact of these variables on uses of digital technologies is explored further in the exploratory analytical section of this working paper, but before then this section provides an overview of the main findings concerning how the respondents in the different surveys used digital tech.

#### *Usage and non-usage of digital technologies*

Given that this survey was specifically about migrants’ uses of digital tech, it is unsurprising that a very substantial majority of respondents did indeed use such technologies (Table 7). However, the figures do vary slightly between the surveys. Predictably, given the large number of migrants in the INURED survey being in the USA, everyone in that sample did use digital technologies, but in the IMJA survey just over 6% did not. By coincidence, this percentage is closely similar to that in our Nepal survey.<sup>20</sup>

Table 7: Usage of digital technologies

Do you use any digital technologies?	Haiti (with INURED: English n=40, and Creole n=9) <b>n=49*</b>	Brazil (with IOM: Portuguese n=120, Creole n=2, English n=2, French n=6). <b>Total n=130*</b>	Brazil (with IMJA: Creole and Portuguese) <b>n=193*</b>
Yes	49 (100%)	126 (96.9%)	181 (93.8%)
No	0 (0%)	4 (3.1%)	12 (6.2%)

The survey specifically asked those who did not use them to explore eight possible reasons why this was so, and for the IMJA survey 36.8% said it was because they were expensive, with a further 21.1% saying that they were difficult to use. Although we cannot make sweeping generalisations based on such a small sample, these reasons are consonant with the views from our other surveys where cost and a lack of education in how to use digital tech mean that it is probably the poorest and most marginalised who are usually least likely to gain from their potential benefits. Those who clicked on the “other” box and provided additional free-text comments largely repeated the original eight options such as they don’t have the money (“*Não tenho dinheiro*”), although others provided additional suggestions such as devices break easily (“*Li jkrazze fasil nan menm*”) or their phone had been stolen (“*Furtaram o meu celular*”).

#### *Frequency of use of digital technologies*

Tables 8-10 illustrate the frequency of use of particular technologies, with green shading indicating instances where ≥90% of the sample fell into that category.

<sup>20</sup> In our survey in Nepal, 6% of respondents did not use these technologies.

Table 8: Frequency of use by respondents of different types of digital technology and the Internet in the IOM survey in Brazil<sup>21</sup>

Total n=130	Desktop computer	Digital radio	Digital TV	Basic mobile/ Feature phone	Mobile smart phone	Laptop	Tablet	Internet
<b>Daily</b>	30 (41.1%)	5 (8.5%)	34 (49.3%)	41 (54.7%)	100 (94.3%)	29 (39.7%)	14 (23.7%)	105 (100%)
<b>Weekly</b>	8 (11.0%)	7 (11.9%)	5 (7.2%)	4 (5.3%)	2 (1.9%)	10 (13.7%)	5 (8.5%)	0 (0)
<b>Monthly</b>	7 (9.6%)	4 (6.8%)	4 (5.8%)	1 (1.3%)	0 (0)	5 (6.8%)	7 (11.9%)	0 (0)
<b>Never</b>	28 (38.4%)	43 (72.9%)	26 (37.7%)	29 (38.7%)	4 (3.8%)	29 (39.7%)	33 (55.9%)	0 (0)

Table 9: Frequency of use by respondents of different types of digital technology and the Internet in the IMJA survey in Brazil<sup>22</sup>

Total n=193	Desktop computer	Digital radio	Digital TV	Basic mobile/ Feature phone	Mobile smart phone	Laptop	Tablet	Internet
<b>Daily</b>	40 (22.1%)	54 (29.8%)	92 (50.8%)	60 (33.1%)	174 (96.1%)	49 (27.2%)	18 (10.1%)	172 (95.0%)
<b>Weekly</b>	15 (8.3%)	30 (16.6%)	25 (13.8%)	1 (0.6%)	1 (0.6%)	23 (12.8%)	13 (7.3%)	5 (2.8%)
<b>Monthly</b>	10 (5.5%)	9 (5%)	5 (2.8%)	3 (1.7%)	0 (0)	11 (6.1)	13 (7.3%)	1 (0.6%)
<b>Never</b>	116 (64.1%)	88 (48.6%)	59 (32.6%)	117 (64.6%)	6 (3.3%)	97 (53.9%)	135 (75.4%)	3 (1.7%)

<sup>21</sup> Percentages indicate the percentage of respondents who selected each answer (100% would indicate that all a question's respondents chose that option). Note that many people did not answer all of these questions, and the percentages are *not* of the whole sample.

<sup>22</sup> Percentages indicate the percentage of respondents who selected each answer (100% would indicate that all a question's respondents chose that option) Note that many people did not answer all of these questions, and the percentages are *not* of the whole sample.

Table 10: Frequency of use by respondents of different types of digital technology and the Internet in the INURED Haiti survey<sup>23</sup>

Total n=49	Desktop computer	Digital radio	Digital TV	Basic mobile/ Feature phone	Mobile smart phone	Laptop	Tablet	Internet
<b>Daily</b>	26 (60.5%)	14 (35%)	32 (69.6%)	20 (55.6%)	48 (100%)	39 (79.6%)	18 (42.9%)	48 (98%)
<b>Weekly</b>	6 (14%)	4 (10%)	4 (8.7%)	0 (0)	0 (0)	4 (8.2%)	7 (16.7%)	1 (2%)
<b>Monthly</b>	3 (7%)	6 (15%)	6 (13%)	0 (0)	0 (0)	3 (6.1%)	9 (21.4%)	0 (0)
<b>Never</b>	8 (18.6%)	16 (40%)	4 (8.7%)	16 (44.4%)	0 (0)	3 (6.1%)	8 (19%)	0 (0)

Four interesting observations can be made about these data:

- The vast majority (>94%) of respondents in all three surveys used mobile smart phones, although many of them also used basic feature phones.
- Likewise, >95% of the sample in all three surveys accessed the Internet daily.
- With most of the technologies used, respondents either used them daily or never; there were rather few respondents who might use a technology weekly or monthly.
- Respondents to the surveys distributed by IMJA and IOM had broadly similar distributions, although the INURED Haiti sample had many more people who used desktops and laptops alongside mobile phones, probably reflecting their generally better off status, with many living in the USA.

*For what purposes do migrants in Haiti and Brazil use digital technologies?*

Our surveys concentrated on the uses of four types of digital device (mobile phones, tablets, laptops and desktop computers) in order to gain a deeper understanding of why migrants used particular technologies.<sup>24</sup> Tables 11-13 summarises these results; the percentages indicate the frequencies with which people who answered each question chose that option. Some people used several different types of device for the same purpose, and the percentages therefore indicate the share of the sample who said they used a given device for a specific purpose. Thus 65.2% of those in the IOM-supported survey who responded used a mobile phone for playing games, but 10.1% also used a tablet to play games, 14.5% used a laptop, and 10.1% a desktop computer. Interestingly these results also suggest that there was greater use of multiple devices for the same purpose than in some of our other surveys in Nepal, Malaysia and South Africa.

<sup>23</sup> Percentages indicate the percentage of respondents who selected each answer (100% would indicate that all a question’s respondents chose that option) Note that many people did not answer all of these questions, and the percentages are *not* of the whole sample.

<sup>24</sup> The specific question asked was “Focusing on just four of these devices (mobile phones, tablets, laptops, desktop computers), please indicate which types of technology you use for what purpose (click all of the relevant boxes). If you do not use a specific technology, please just leave the relevant boxes blank.”

Table 11: Usage of types of digital device for different purposes (IOM survey in Brazil)

	Mobile phones	Tablets	Laptops	Desktop computers
Audio calls	113 (87.6%)	6 (4.7%)	5 (3.9%)	5 (3.9%)
Text messages	97 (84.3%)	5 (4.3%)	5 (4.3%)	8 (7%)
Video calls	114 (74%)	11 (7.1%)	15 (9.7%)	14 (9.1%)
Playing games	45 (65.2%)	7 (10.1%)	10 (14.5%)	7 (10.1%)
Watching videos for entertainment	93 (64.6%)	12 (8.3%)	20 (13.9%)	19 (13.2%)
Work	65 (46.8%)	12 (8.6%)	30 (21.6%)	32 (23%)
Learning and education	86 (53.4%)	15 (9.3%)	31 (19.3%)	29 (18%)
Accessing government services	66 (53.7%)	5 (4.1%)	27 (22%)	25 (20.3%)
Social networking	110 (69.2%)	10 (6.3%)	21 (13.2%)	18 (11.3%)
Cultural activities	54 (58.1%)	1 (1.1%)	20 (21.5%)	18 (19.4%)
Political activities	45 (59.2)	3 (3.9%)	16 (21.1%)	12 (15.8%)
Health activities	75 (64.1%)	4 (3.4%)	21 (17.9%)	17 (14.5%)
News updates	71 (61.7%)	6 (5.2%)	23 (20%)	15 (13%)
Other	13 (65%)	2 (10%)	3 (15%)	2 (10%)

Table 12: Usage of types of digital device for different purposes (IMJA survey in Brazil)

	Mobile phones	Tablets	Laptops	Desktop computers
Audio calls	180 (88.7%)	4 (2%)	13 (6.4%)	6 (3%)
Text messages	177 (85.5%)	6 (2.9%)	18 (8.7%)	6 (2.9%)
Video calls	179 (85.2%)	4 (1.9%)	23 (11%)	4 (1.9%)
Playing games	107 (83.6%)	4 (3.1%)	9 (7%)	8 (6.3%)
Watching videos for entertainment	149 (72.7%)	8 (3.9%)	36 (17.6%)	12 (5.9%)
Work	101 (66.4%)	6 (3.9%)	18 (18.4%)	17 (11.2%)
Learning and education	133 (65.8%)	11 (5.4%)	43 (21.3%)	15 (7.4%)
Accessing government services	128 (75.3%)	3 (1.8%)	26 (15.3%)	13 (7.6%)
Social networking	171 (78.4%)	8 (3.7%)	28 (12.8%)	11 (5%)
Cultural activities	141 (75.8%)	4 (2.2%)	30 (16.1%)	11 (5.9%)



<b>Political activities</b>	113 (81.9%)	4 (2.9%)	17 (12.3%)	4 (2.9%)
<b>Health activities</b>	139 (84.8%)	3 (1.8%)	16 (9.8%)	6 (3.7%)
<b>News updates</b>	158 (81%)	6 (3.1%)	22 (11.3%)	9 (4.6%)
<b>Other</b>	40 (97.6)	0 (0)	1 (2.4%)	0 (0)

Table 13: Usage of types of digital device for different purposes (INURED survey, Haiti)

	<b>Mobile phones</b>	<b>Tablets</b>	<b>Laptops</b>	<b>Desktop computers</b>
<b>Audio calls</b>	47 (75.8%)	5 (8.1%)	6 (9.7%)	4 (6.5%)
<b>Text messages</b>	49 (77.8%)	6 (9.5%)	6 (9.5%)	2 (3.2%)
<b>Video calls</b>	47 (58%)	8 (9.9%)	21 (25.9%)	5 (6.2%)
<b>Playing games</b>	17 (56.7%)	5 (16.7%)	5 (16.7%)	3 (10.0%)
<b>Watching videos for entertainment</b>	36 (44.4%)	10 (12.3%)	26 (32.1%)	9 (11.1%)
<b>Work</b>	30 (30.6%)	10 (10.2%)	34 (34.7%)	24 (24.5%)
<b>Learning and education</b>	30 (29.7%)	14 (13.9%)	37 (36.6%)	20 (19.8%)
<b>Accessing government services</b>	23 (29.5%)	7 (9%)	32 (41%)	16 (20.5%)
<b>Social networking</b>	45 (50.6%)	8 (9%)	28 (31.5%)	8 (9%)
<b>Cultural activities</b>	39 (46.4%)	8 (9.5%)	30 (35.7%)	7 (8.3%)
<b>Political activities</b>	33 (44.6%)	6 (8.1%)	24 (32.4%)	11 (14.9%)
<b>Health activities</b>	33 (46.5%)	7 (9.9%)	24 (33.8%)	7 (9.9%)
<b>News updates</b>	42 (45.2%)	11 (11.8%)	26 (28%)	14 (15.1%)
<b>Other</b>	6 (33.3%)	5 (27.8%)	4 (22.2%)	3 (16.7%)

It is not easy to analyse these data in aggregate, but at least five interesting observations can be made:

- In line with our previous surveys in Asia and Africa, mobile phones dominate for all purposes, although the respondents to the INURED-supported Haitian survey had a much broader pattern with generally lower percentages of mobile phone use than in the two Brazilian surveys.
- Tablets and laptops were generally not very widely used at all for any purposes, although. However, laptops were used quite frequently for learning and for work in all of the surveys (around 20% of the samples in Brazil) rising to around 35% for the INURED-supported Haitian survey.
- Desktops featured most prominently for work purposes with 25% of respondents in the INURED-supported Haitian survey using them in this way, and 23% of those in the IOM

survey doing so, in contrast to only 11% in the IMJA-supported survey (where it remained the highest level of use of desktops).

- Interestingly, too, it was only in the IMJA-supported survey of Haitians in Brazil that mobiles were used by more than 80% of respondents for political and health activities as well as for news updates (figures for these in the IOM-supported survey were between 59 and 64%, whereas they were considerably lower around 45% in the INURED Haitian survey)

Overall, it therefore appears that different groups of migrants do indeed use these technologies in varying ways, and it is possible to conjecture a spectrum of such usage. In essence, the Haitian migrants to Brazil (with least in full-time work and most out of work) tended to concentrate primarily on the use of mobile phones ubiquitously, whereas those Haitians who completed the INURED survey (many of whom were in full-time work and in the USA) made much more diverse use of all these technologies. Respondents to the IOM survey, mostly from Venezuela, represented a mid-point between these two extremes.

The free-text options for respondents also provided an opportunity to gain some insights into the additional uses that migrants made of digital tech (n=37 for IOM survey; n=174 for IMJA survey; n=14 for INURED). It is not easy to interpret these results, because it seems that in the interviewer-led surveys conducted by IMJA, most respondents were encouraged to give an answer, but about half of these implied that they did not make any other use of digital tech. In the other surveys, most people only responded if they did indeed use such tech for other purposes.

Table 14: Most frequent free-text responses to question about other uses of digital tech and the types of technology used for them

Most frequent responses <sup>25</sup>	IOM survey (n=37)	IMJA survey (n=174)	INURED survey (n=14)
I don't have ("n <sup>o</sup> tenho", "n <sup>o</sup> tem", "pa genyen")		23.6%	
No/nothing/don't use for anything else/none ("n <sup>o</sup> ", "nada", "anyen", "N <sup>o</sup> uso para outras finalidades", "nenhuma")		29.9%	7.1%
Telephone/Mobile ("telefone", "celular", "telefon selil <sup>e</sup> ")	27.0%	24.5%	
Communication ("comunica <sup>ç</sup> o")	16.2%		

The most diverse responses were from the INURED survey, and these again reflected the better established status and employment of Haitian migrants in their destination countries, with responses including for business, group (and Zoom) meetings, banking, weather information, shopping, recipes and news from Haiti. The IMJA responses, although large in number were more limited in scope, with for example only one respondent (0.5%) noting that they used digital tech for each of the following: work ("para trabalhar"), selling ("para venda"), finding one's location and travelling by uber ("para localizar viagem e uber"), and for commercial reasons ("para actividades comerciais"). Two respondents likewise said that they used digital

<sup>25</sup> Note all spelling in Portuguese and Creole are given in the original spellings of the respondents, or in the case of the IMJA surveys of the interviewers who wrote them down).

tech for banking and finance (“*conta bancária*”, “*atividade financeira*”), and a couple also used it for religious purposes (“*Estudo bíblico*”, “*Atividades religiosos*”). Mobile phones were by far the dominant form of tech mentioned in these surveys. The IOM survey respondents, although fewer in number, again emphasised that they used mobile phones for most things, and included quite a range of uses such as for banking, studying, working, religious purposes, to buy and sell online, to communicate with their families in Venezuela, and to learn about technology. One noted that they were learning programming, but that without a PC or notebook it was difficult “*Estou aprendendo programação mais sem uma PC ou Notebook fica difícil*”)

*Likes and dislikes of using digital technologies*

The survey also explored what the migrant respondents liked and disliked about using devices and apps, by asking them which of a list of options were their top three reasons for liking and top three for disliking them.<sup>26</sup>

Figure 8: Reasons for liking digital technologies IOM

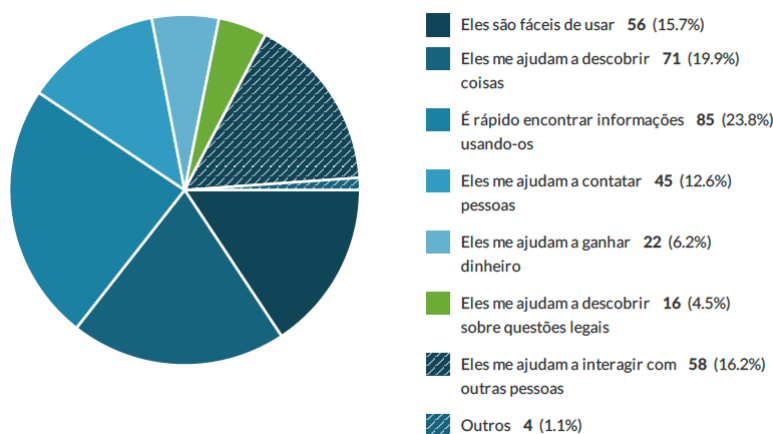
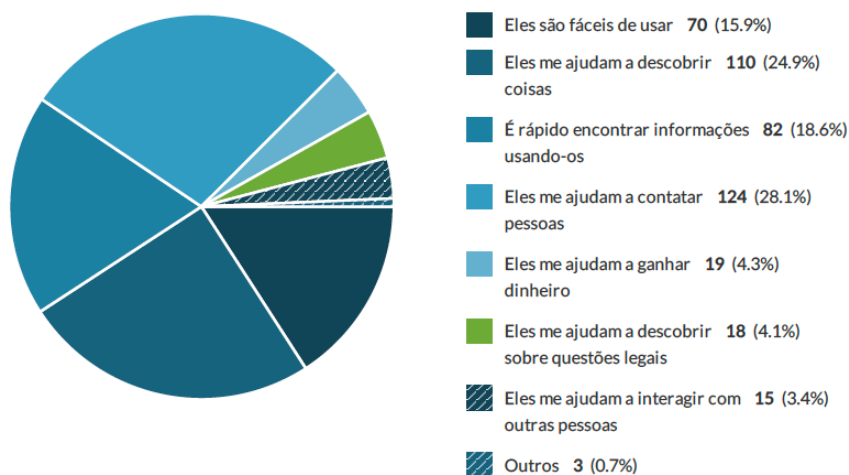
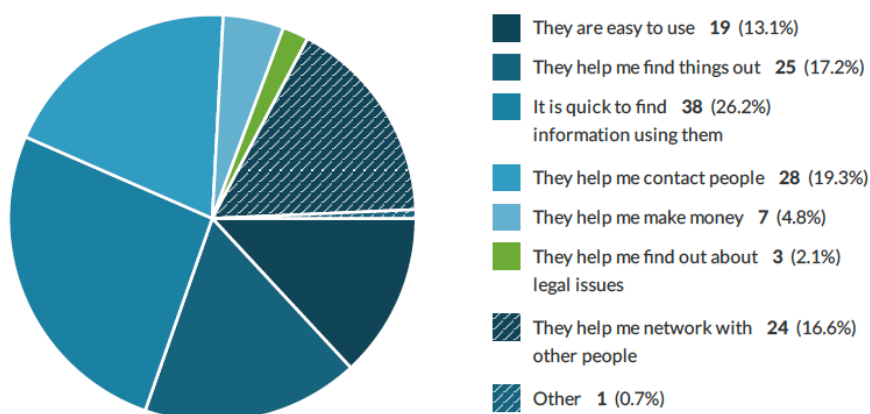


Figure 9: Reasons for liking digital technologies IMJA



<sup>26</sup> Two separate questions were asked, one for likes (What do you like about using digital technologies (devices and apps). Please click button on the most important factors (up to THREE) that apply, or add suggestions by clicking on "Other"), and one for dislikes (What don't you like about using digital technologies (devices and apps)? Please click button on the most important factors (up to THREE) that apply, or add suggestions by clicking on "Other").

Figure 10: Reasons for liking digital technologies INURED



Taking all three surveys into consideration, the main reason why respondents said that they liked digital technologies was because it is quick to find out information using them (IOM 23.8%, IMJA 18.6%, INURED 26.2%). While this was the most frequently cited like for the INURED and IOM surveys, it is interesting to note that for the IMJA surveys their potential for contacting people (28.1%) and for finding things out (24.9%) were more popular than the speed with which they enabled information to be found out.

The reasons that respondents disliked digital tech also varied quite considerably between the surveys. In the INURED survey, 28.2% of respondents expressed concern that they could be tracked when using digital tech, whereas only 8.1% of the IOM respondents and 12% of the IMJA respondents mentioned this. The costs of connectivity (21.1%) and devices (19.5%) were the most important dislikes among the IOM survey respondents, and the health risks (20.4%) and concerns that they are easy to lose (17.7%) dominated amongst respondents to the IMJA-led survey. Overall, almost half (46.5%) of all dislikes across the surveys were concerned with security (stolen, lost and tracking) and safety (abuse and harassment).

Figure 11: Reasons for disliking digital technologies IOM

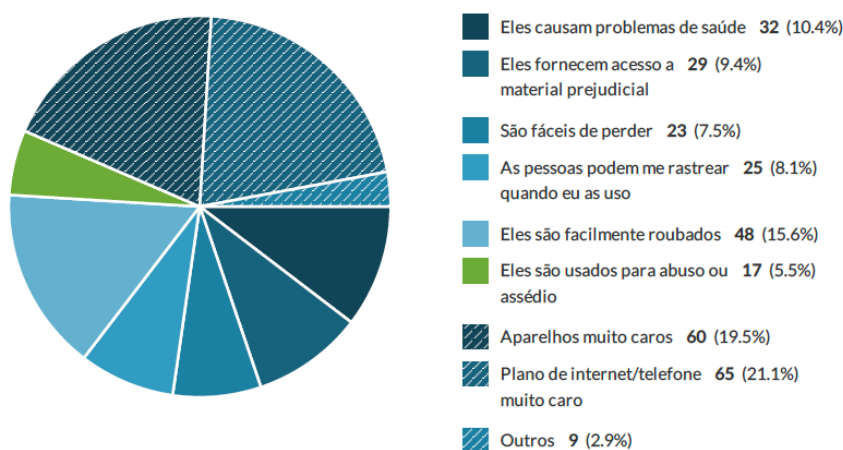


Figure 12: Reasons for disliking digital technologies IMJA

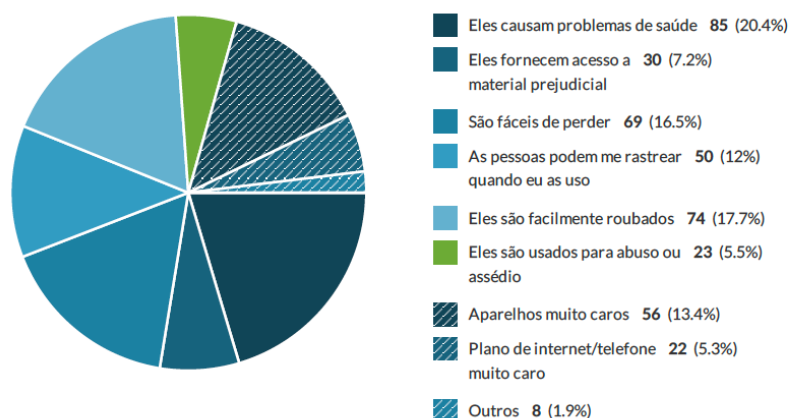
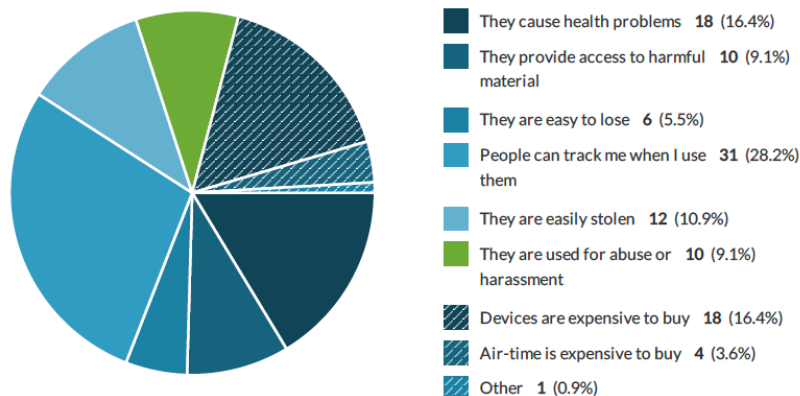


Figure 13: Reasons for disliking digital technologies INURED



Relatively few respondents provided additional free-text response about other things they liked (1.8% of total sample) or disliked (4.8% of total sample) about digital tech, but these comments were nevertheless informative. Among the additional likes were their use for communicating with family members, banking, budgeting, and for work. Two, though gave particularly fascinating insights into the digital lives of migrants: one respondent (in the INURED survey) thus commented that it allowed them to be informed about the sociopolitical and cultural situation all over the world (“*Li pèmèt mwen enfòme sou sitiyasyon sosyopolitik ak kiltirèl tou patou nan mond lan*”), whereas another (in the IOM survey) stated that these technologies made them not feel alone in the other country – although they are away from their family, they can also be close to them (“*Eles faz que eu não me sinto sozinha no outro país. Faz que eu este longe de minha família. Pero perto também*”).

Likewise, the additional dislikes add further nuances to our understandings of migrant concerns. Respondents to the IOM survey thus highlighted that digital tech is addictive (“*São aditivas*” and “*Causam dependência e vício*”), they are insecure (“*Os celular nao tem ninguem tipo de seguranza*”), and they promote consumerism through advertising (“*Promovem consumismo a partir da publicidade*”) whereas those responding to the IMJA interviewers reasserted their expense (“*manke Lana*” and “*Mwen oblije itilize WiFi koz plan entènèt la ak kadastra pa fasil*”), as well as their potential use for harassment (in this case, requests for money: “*As pessoas quando me acham quer pedir dinheiro e eu não tenho*”)



*Additional potential uses of digital technologies*

Some 268 respondents provided additional free-text responses about how they would like to use digital technologies but cannot do so at present. This question is crucially important for our ongoing work in supporting migrants and tech developers in building interventions that might reduce inequalities associated with migration. However, as noted above in the sub-section on the uses of digital tech, the interviewers/facilitators from IMJA were particularly diligent in trying to elicit responses to this question, even when many of the migrants they spoke with did not actually have anything constructive to suggest. Thus 42.8% of responses to the IMJA-facilitated survey reflected views, either that they did not know or could not think of anything, unlike the INURED and IOM surveys where most people who did not want to answer this question merely left it blank. The 20% of the INURED survey who indicated that they did not know how else they could use digital tech responded thus because they were already using it extensively.

Table 15: Most frequent free-text responses to question about what respondents would like to use digital technologies for that they cannot already use them for

Most frequent responses	IOM survey (n=68)	IMJA survey (n=180)	INURED survey (n=20)
I don't have/I have nothing else (to suggest) ("não tenho", "não tem", "pa genyen", "Não tenho mais nada")		19.4%	
I don't know ("não sei")		11.7%	
No/nothing/don't use for anything else/none ("não", "nada", "anyen", "nenhuma", "neant")	2.9%	11.7%	20.0%
Business development ("pra divulgar minha loja", "pou biznis")	2.9%	1.1%	5.0%
Making money ("ganhar dinheiro", "pou me fê lajan")	10.3%	5.0%	15.0%
Work related ("trabalho", "trabalhar", "travay")	22.0%	0.6%	5.0%
Education/learning/studying ("educação", "estudar", "etidye", "aprender")	29.4%	9.4%	

As Table 15 highlights, using digital tech for education and learning, for work, for making money and for business development were all popular responses to the question of what migrants (and their dependents) want to use digital tech for. Subtle differences, though, could be identified in the responses to the different surveys. The INURED facilitated survey, for example, again reflected a higher-level of engagement with digital tech, with respondents focusing especially on making money and business development. The IOM respondents, in contrast focused especially on education and learning, as well as on work-related purposes.

As so often with more qualitative, free-text responses it is also the unusual single responses that add much to our understandings. These responses, for example, highlight both the business and educational importance of digital tech for migrants, but also some of the more idealistic visions that they have for its use:

- "Pou transfere lajan san peye nan peyim. Pou patisipe nan pwojè politik poum fe lajan sou entenet" (To transfer money without payment to my country. To participate in political projects to make money online) (INURED-facilitated survey)

- “*Pou mwen fè divilgasyon pwodiksyon akademik ak entèlekyèl mwen*” (To disclose my academic and intellectual output) (INURED-facilitated survey)
- “*Pra levar mensagens de paz, amor e união*” (To carry messages of peace, love and union (IOM-facilitated survey)
- “*Poum oryante lemon*” (To orient the world) (IMJA-facilitated survey)

The most striking finding from these responses is that most of the things that migrants aspire to do with digital tech can already be done quite easily if only they knew how. This reinforces the emergent findings from our previous surveys elsewhere that suggest that one of the greatest needs is to educate migrants in the wise, safe and secure use of digital technologies so that they can use them for such existing purposes, rather than designing entirely new technologies that might not actually serve their needs. Given the emphasis of our work package within MIDEQ on reducing inequalities (“*desigualdade*”, “*inegalite*”) associated with migration through digital tech, and thereby increasing equity (“*equidade*”, “*ekite*”) and equality (“*igualdade*”, “*egalite*”), it is striking that none of these italicised words features in the responses to this question about what migrants would like to do with and through digital tech. As is so often the case, most migrants seek to improve their economic conditions and those of their families, and therefore it is these that dominate in their thinking about digital tech. It is refreshing to see that one person at least felt it necessary to record that they wanted to use digital tech more altruistically to carry messages of peace and love.

*Use of digital technologies at different stages during the migration journey*

Our research in Nepal, Malaysia and South Africa has shown that in general migrant use of digital technologies increases during the migration process. However, our evidence from Haiti and Brazil is not so clear cut (see Tables 16-18).<sup>27</sup> This might be because of uncertainties in the ways in which some of these questions were answered, or it might reflect a generally higher level of familiarity with digital tech amongst all migrants even before departure from Haiti, Venezuela, or elsewhere.

Table 16: Frequency of digital technology use at different stages in the migration (IOM facilitated survey)

	Very often	Sometimes	Rarely	Never
<b>Deciding to migrate (n=91)</b>	75.8%	12.1%	6.6%	5.5%
<b>Before departure (n=87)</b>	74.7%	11.5%	11.5%	2.3%
<b>During the migration journey (n=95)</b>	71.6%	16.8%	9.5%	2.1%
<b>Upon arrival in destination country (n=105)</b>	76.2%	20.0%	3.8%	0
<b>While in new location (n=83)</b>	68.7%	25.3%	6.0%	0
<b>Deciding to return home (n=62)</b>	25.8%	19.4%	21.0%	33.9%
<b>When/if you have returned home (n=51)</b>	23.5%	13.7%	11.8%	51.0%

<sup>27</sup> Around 47% of respondents to the INURED-facilitated survey, 93% of the IOM one, and 92% of the IMJA one, stated that they were migrants in the question concerning whether they were migrants, returned migrants, or family members, but varying numbers of respondents answered the questions about using digital technologies during different parts of the migration journey (and many fewer answered the question about returning home). This reflects some fluidity in defining such categories. A family member of a migrant, for example, could also have migrated at some point in time. In interpreting these Tables it must be remembered that not everyone answered all of the questions. Note here that the percentages are based on the numbers of responses to each question rather than the total sample population.

Table 17: Frequency of digital technology use at different stages in the migration (IMJA facilitated survey)

	Very often	Sometimes	Rarely	Never
<b>Deciding to migrate (n=178)</b>	38.2%	18.5%	11.2%	32.0%
<b>Before departure (n=178)</b>	33.7%	21.3%	13.5%	31.5%
<b>During the migration journey (n=178)</b>	29.8%	22.5%	10.7%	37.1%
<b>Upon arrival in destination country (n=178)</b>	52.8%	19.1%	6.2%	21.9%
<b>While in new location (n=178)</b>	62.4%	19.1%	3.9%	14.6%
<b>Deciding to return home (n=85)</b>	28.2%	16.5%	10.6%	44.7%
<b>When/if you have returned home (n=69)</b>	21.7%	7.2%	11.6%	59.4%

Table 18: Frequency of digital technology use at different stages in the migration (INURED facilitated survey)

	Very often	Sometimes	Rarely	Never
<b>Deciding to migrate (n=20)</b>	35.0%	40.0%	15.0%	10.0%
<b>Before departure (n=21)</b>	52.4%	38.1%	4.8%	4.8%
<b>During the migration journey (n=16)</b>	50.0%	31.3%	12.5%	6.3%
<b>Upon arrival in destination country (n=20)</b>	70.0%	25.0%	0	5.0%
<b>While in new location (n=19)</b>	52.6%	42.1%	0	5.3%
<b>Deciding to return home (n=16)</b>	43.8%	50.0%	0	6.3%
<b>When/if you have returned home (n=16)</b>	50.0%	31.3%	12.5%	6.3%

Overall these tables indicate that with the IMJA- and INURED-facilitated surveys, both focusing on Haitian migrants and their families, there indeed appears to have been an increase in use of digital tech very frequently from deciding to migrate to arriving in destination country (Brazil, and for some the USA). However, with the INURED-facilitated survey this figure then fell back for those using it very frequently while in the new location (to around 53%), whereas it continued to increase while in Brazil with the IMJA-facilitated survey (to around 62% from 34% very frequently use before departure). The IOM-facilitated survey shows a contrasting picture, with around 75% of migrants already using digital tech very frequently before migration, and levels of very frequent use only falling off to around 68% while living in Brazil.

As with our other surveys, it is also interesting to note the apparent decline in usage in deciding to return home and when at home. This may be because many migrants do not actually wish to return (or cannot) to their countries of origin, as noted above, which also explains why fewer of the respondents provided answers to these final two options than was the case with the questions relating to the early stages of migration.

### Respondents' usage of apps

Respondents were also asked about their usage of different apps, with a further opportunity being provided for them to share additional qualitative information about the other apps that they used more frequently than these.

Tables 19-21 indicates three findings that were also common in our surveys in the other countries where we have been working (South Africa, Malaysia and Nepal): first, the overwhelmingly dominant apps used by migrants in our three Haitian and Brazilian surveys are WhatsApp and Facebook (followed by YouTube and Messenger); second, that Chinese apps such as Alipay, Baidu and WeChat are extremely rarely used; and third that there is quite a strong split between apps that are used daily or never. Given the US geo-political influence across Latin America and the Caribbean, the dominance of US apps (and those belonging to Meta in particular – WhatsApp, Facebook and Messenger) is unsurprising, but the relative low usage of Twitter might be seen as unexpected given its widespread use in the USA, especially among men in the 25-34 age. This may in part, though, be explained because Twitter tends to be used by higher educated and richer urban populations.<sup>28</sup>

Table 19: Frequency of usage of different apps in the IOM-facilitated survey

	Number of responses	Never	Annually	Monthly	Weekly	Daily
Alipay	55	54	0	0	0	1
Baidu	55	53	1	0	0	1
Facebook	116	12	2	7	13	82
Instagram	96	10	3	10	11	62
Messenger	95	12	4	9	23	47
Netflix	82	19	3	17	14	29
QQ	57	55	0	0	0	2
Twitter	67	38	5	5	6	13
WeChat	54	49	0	3	1	1
WhatsApp	120	12	1	4	2	101
YouTube	108	9	1	5	15	78
Other	34					

Table 20: Frequency of usage of different apps in the IMJA-facilitated survey

	Number of responses	Never	Annually	Monthly	Weekly	Daily
Alipay	178	178	0	0	0	0
Baidu	178	177	1	0	0	0
Facebook	178	9	3	12	41	113
Instagram	178	72	3	25	30	48
Messenger	178	15	4	17	50	92
Netflix	178	121	3	7	25	32
QQ	178	177	0	0	0	1
Twitter	178	141	8	8	11	10
WeChat	178	176	0	0	0	2
WhatsApp	178	1	0	1	3	173
YouTube	177	3	0	7	20	147
Other	147					

<sup>28</sup> For a recent 2022 overview of Twitter usage see <https://www.omnicoreagency.com/twitter-statistics>.

Table 21: Frequency of usage of different apps in the INURED-facilitated survey

	Number of responses	Never	Annually	Monthly	Weekly	Daily
Alipay	31	31	0	0	0	0
Baidu	31	28	1	1	1	0
Facebook	43	3	3	7	8	22
Instagram	43	8	3	4	9	19
Messenger	40	9	1	10	3	17
Netflix	40	5	4	3	16	12
QQ	32	32	0	0	0	0
Twitter	36	18	3	5	2	8
WeChat	33	29	1	2	0	1
WhatsApp	47	2	2	2	2	39
YouTube	46	1	0	5	15	25
Other	20					

Respondents also had the opportunity to indicate what other apps they used more frequently than those in the Tables above, and again the three different samples produced interestingly different results. The 20 INURED-facilitated respondents mostly gave unique answers to the question and focused on quite advanced digital skills such as banking apps, Photoshop and LinkedIn (Table 21). Only three apps were mentioned more than twice, and these were Signal (a secure messaging app), TikTok and Zoom, each of which were mentioned twice.

The 34 IOM-facilitated respondents reflected more commonality, with seven mentions of Zoom, six of Telegram, and five each of Google Meet and TikTok, along with various other apps mentioned fewer times (Table 19).

In contrast, the IMJA-facilitated survey, produced a rather different set of comments from the 147 respondents for whom the interviewers completed a response (Table 20). Forty-eight of these said that they did not use any other apps apart from those listed in the original questions. A further 25 cited WhatsApp and 10 more mentioned Facebook, although these had already been listed in the original tabulated question. This could have reflected a lack of clarity by either the respondents themselves or the interviewers. Some respondents did, though, also reflect an interesting collection of other apps, with the most frequently cited being TikTok with 36 mentions, Kwai (a social video app) with 12 mentions, Telegram with 8, Snapchat with 7, and Google, Imo (audio/video calling and chat app) and Snapchat (multimedia instant messaging app) also each being mentioned 5 times. Many other apps were also mentioned by only one or two people, and these ranged from banking apps, to dating-focused social networks, such as Tinder and Badoo, and health apps, such as the cycling and running app Strava.

Finally, respondents were also asked whether they had ever used an app specifically designed for migrants. The response was striking and clear in all of the surveys: very few respondents claimed ever to have used an app that was specifically designed for migrants. Only 2% of the INURED-facilitated survey respondents said they had used such an app, in the IOM-facilitated survey the figure was 4%, and in the IMJA one it was 5.5%. However, all of the apps actually mentioned as being “migrant apps” were in reality generic ones such as MonCash (a mobile money app with 7 mentions), Bolsa família (another money transfer app with one mention) Trampolins (mentioned once), and Oka (provides a series of free Mac and IOS utility app; mentioned once). This reinforces our findings from elsewhere that although migrants do use quite a range of apps, they rarely use ones that have been explicitly designed for them by international organisations and profit seeking companies.



## Exploratory data analysis

This working paper is primarily intended to present the early results of our online surveys of migrants and their families who have left Haiti for Brazil, but it also includes those who have left Haiti for other destinations and others who have come to Brazil from other countries of origin, especially Venezuela. Previous and future working papers will and have presented the findings for the other countries in which we are working within the MIDEQ Hub, and we will then present the main analyses on a corridor-by-corridor, and then global, basis also drawing on the MIDEQ-wide survey conducted by our colleague in other corridors and work packages.

This section focuses on the possible influences that the socio-economic characteristics (age, gender, migration status, occupational status, and country of origin) may have had on the use of digital tech by migrants and their families. Unlike in our previous reports where a uniform methodology was adopted, the Brazilian surveys are complicated by the use of both online surveys and the facilitator/interviewer mediation in the case of those undertaken by the MIDEQ country lead, IMJA. We cannot be sure, therefore, that the results from the different surveys are directly comparable, and although all of the migrants in the IMJA-facilitated survey were from Haiti, and most for the IOM-facilitated survey were from Venezuela, we cannot be certain that these reflect actual differences between migrants from these two countries. We therefore present here analyses of each survey separately, and have not sought to combine them into a single aggregate overview.

Where relevant,  $\chi^2$  tests were used to test relationships statistically (at  $p=0.05$  level). In general, the considerable degree of uniformity in the data, with most respondents for example using smart phones and the Internet in similar ways, makes it difficult to differentiate between the impact of any particular socio-economic variable on the overall pattern observed in the previous section.<sup>29</sup>

### Age and usage of digital technologies

With the above caveats in mind, age does not generally appear to be particularly significantly related to the use of digital tech in any of these three surveys. As noted above, the large number of cells with low numbers of responses, meant that many cells had to be aggregated, and there were usually several different ways in which this could be done. Hence, multiple options were explored to try to see if any were significant, but very few proved to be so. Table 22 illustrates this by selecting seven indicative exemplar tests (for use of desktops and smart phones, likes and dislikes, use before and after migration, and use of Facebook as an example of an app<sup>30</sup>).

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<sup>29</sup> Not least, this issue is exacerbated because it means that there are low frequencies in many of the cells of the contingency tables, which requires their amalgamation (if any expected frequency is  $< 5$ , although there are those who suggest that this figure is overly conservative; Fisher's Exact Test could be an alternative in these circumstances). It should also be noted that although no responses were recorded in our data set, these were not included for the purpose of our statistical analysis.

<sup>30</sup> Facebook was chosen as the exemplar app because responses showed more variation than many of the apps about which questions were asked, and thus there were fewer cells with low frequencies.

Table 22: Examples of  $\chi^2$  tests for age related questions

	IOM-facilitated survey	IMJA-facilitated survey	INURED-facilitated survey <sup>31</sup>
Age and use of desktops	$\chi^2 = 10.59$ ; 20 df, critical value $p = 0.05$ is 31.41	$\chi^2 = 12.78$ ; 6 df, critical value $p = 0.05$ is 12.59	Sample too small but appears not significant
Age and use of smart phones	$\chi^2 = 15.67$ ; 20 df, critical value $p = 0.05$ is 31.41	$\chi^2 = 1.62$ ; 2 df, critical value $p = 0.05$ is 5.99	Sample too small
Age and dislikes	$\chi^2 = 22.56$ ; 21 df, critical value $p = 0.05$ is 32.67	$\chi^2 = 10.84$ ; 14 df, critical value $p = 0.05$ is 23.69	Sample too small but appears not significant
Age and likes	$\chi^2 = 23.31$ ; 24 df, critical value $p = 0.05$ is 37.65	$\chi^2 = 18.89$ ; 12 df, critical value $p = 0.05$ is 21.03	Sample too small but appears not significant
Age and use before departure	$\chi^2 = 9.75$ ; 9 df, critical value $p = 0.05$ is 16.92	$\chi^2 = 7.77$ ; 6 df, critical value $p = 0.05$ is 12.59	Sample too small
Age and use in new country	$\chi^2 = 6.03$ ; 6 df, critical value $p = 0.05$ is 12.59	$\chi^2 = 12.13$ ; 6 df, critical value $p = 0.05$ is 12.59	Sample too small
Age and Facebook	$\chi^2 = 41.5$ ; 36 df, critical value $p = 0.05$ is 50.99	$\chi^2 = 19.57$ ; 6 df, critical value $p = 0.05$ is 12.59	Sample too small

Note: relationships significant at 0.05 level are shaded in green

The only possibly significant relationships with age were identified in the IMJA-facilitated surveys for use of desktops and the Facebook app. In the former, it appears that the younger age group (less than 30) used desktops daily less and monthly more than would have been expected if there had been a uniform distribution. With Facebook, the most significant contributor to the  $\chi^2$  value was that the younger people were using it less than would be expected in a uniform distribution.

### Gender and usage of digital technologies

Around 55% (205/371) of the total sample were women and there seems to be rather little differentiation between male and female uses of and attitudes towards the use of digital tech across all three surveys (Table 23). The only significant instances where gender does appear to have been significant were with the use of desktops and the use of tech at different migration stages in the IMJA survey. Thus, Haitian women used desktops on a daily basis less, and men more than would have been expected if there was no significant difference in their behaviours. Likewise, more women and fewer men than might have been expected never used digital tech before migration, and more women and less men similarly never used digital tech in their new country of residence. Tentatively, this might suggest that female Haitian migrants are slightly less familiar with the use of digital tech both before and after migration. It should nevertheless also be noted that there was no significant difference between frequency of male and female smart phone usage or indeed of their likes and dislikes in the usage of digital tech.

<sup>31</sup> Sample size of only 49 responses means that many cells had very few (often zero) responses in them and  $\chi^2$  could not be used appropriately. Where it was deemed feasible  $\chi^2$  estimates were nevertheless made when fewer than half the cells were zero or one based on the available data and these are indicated in the Table as probably not significant. It seems likely, though, that none of the cases where just “sample too small” (and where more than half the cells were zero or one) is stated are significant.

Table 23: Examples of  $\chi^2$  tests for gender related questions

	IOM-facilitated survey	IMJA-facilitated survey	INURED-facilitated survey <sup>32</sup>
Gender and use of desktops	$\chi^2 = 2.06$ ; 3 df, critical value $p = 0.05$ is 7.81	$\chi^2 = 9.2$ ; 3 df, critical value $p = 0.05$ is 7.81	$\chi^2 = 1.05$ ; 3 df, critical value $p = 0.05$ is 7.82
Gender and use of smart phones	$\chi^2 = 1.63$ ; 3 df, critical value $p = 0.05$ is 7.81	$\chi^2 = 0.41$ ; 1 df, critical value $p = 0.05$ is 3.84	Sample too small
Gender and dislikes	$\chi^2 = 6.88$ ; 7 df, critical value $p = 0.05$ is 14.07	$\chi^2 = 2.86$ ; 7 df, critical value $p = 0.05$ is 14.07	$\chi^2 = 4.82$ ; 7 df, critical value $p = 0.05$ is 14.07
Gender and likes	$\chi^2 = 7.11$ ; 6 df, critical value $p = 0.05$ is 12.59	$\chi^2 = 4.10$ ; 6 df, critical value $p = 0.05$ is 12.59	$\chi^2 = 2.71$ ; 6 df, critical value $p = 0.05$ is 12.59
Gender and use before departure	$\chi^2 = 1.58$ ; 3 df, critical value $p = 0.05$ is 7.81	$\chi^2 = 11.83$ ; 3 df, critical value $p = 0.05$ is 7.81	Sample too small
Gender and use in new country	$\chi^2 = 0.47$ ; 2 df, critical value $p = 0.05$ is 5.99	$\chi^2 = 14.83$ ; 3 df, critical value $p = 0.05$ is 7.81	Sample too small
Gender and Facebook	$\chi^2 = 4.34$ ; 4 df, critical value $p = 0.05$ is 9.49	$\chi^2 = 9.24$ ; 4 df, critical value $p = 0.05$ is 9.49	$\chi^2 = 2.14$ ; 4 df, critical value $p = 0.05$ is 9.49

Note: relationships significant at 0.05 level are shaded in green

These findings are in contrast to those from our data for South Africa, for example, where there were more significant differences between male and female usages as well as likes and dislikes of digital tech.

### Occupational status and usage of digital technologies

It is once again not easy to calculate reliable levels of statistical significance relating to the seven types of occupational status used in the three Brazilian surveys, because the overwhelmingly consistent responses mean that many cells in the contingency tables have very low frequencies, and it is not easy to combine categories that would be meaningful if aggregated. This problem was particularly exacerbated in the INURED-facilitated survey where the total number of responses was only 49. The only clearly significant relationship was with the use of desktop computers, where not surprisingly those in full time work used them more frequently than expected, whereas those not working or looking for a job used them less than would be expected if the distributions were uniform.

<sup>32</sup> Sample size of only 49 responses means that many cells had very few (often zero) responses in them and  $\chi^2$  could not be use appropriately. Where it was deemed feasible estimates were nevertheless made based on estimated  $\chi^2$  calculations and these are given in the Table as “Sample too small”.

Table 24: Examples of  $\chi^2$  tests for occupational status related questions

	IOM-facilitated survey	IMJA-facilitated survey	INURED-facilitated survey <sup>33</sup>
Occupation and use of desktops	$\chi^2 = 5.81$ ; 18 df, critical value $p= 0.05$ is 28.87	$\chi^2 = 22.32$ ; 9 df, critical value $p= 0.05$ is 16.92	Sample too small
Occupation and use of smart phones	$\chi^2 = 12.83$ ; 18 df, critical value $p= 0.05$ is 28.87	$\chi^2 = 5.72$ ; 9 df, critical value $p= 0.05$ is 16.92	Sample too small
Occupation and dislikes	$\chi^2 = 26.92$ ; 42 df, critical value $p= 0.05$ is 58.12	$\chi^2 = 20.36$ ; 28 df, critical value $p= 0.05$ is 41.34	Sample too small
Occupation and likes	$\chi^2 = 35.90$ ; 36 df, critical value $p= 0.05$ is 51.00	$\chi^2 = 18.97$ ; 30 df, critical value $p= 0.05$ is 43.77	Sample too small
Occupation and use before departure	$\chi^2 = 23.75$ ; 18 df, critical value $p= 0.05$ is 28.87 <sup>34</sup>	$\chi^2 = 20.41$ ; 15 df, critical value $p= 0.05$ is 25.00	Sample too small
Occupation and use in new country	$\chi^2 = 8.28$ ; 18 df, critical value $p= 0.05$ is 28.87 <sup>35</sup>	$\chi^2 = 14.80$ ; 9 df, critical value $p= 0.05$ is 16.92	Sample too small
Occupation and Facebook	$\chi^2 = 28.9$ ; 12 df, critical value $p= 0.05$ is 21.03	$\chi^2 = 7.48$ ; 12 df, critical value $p= 0.05$ is 21.03	Sample too small

Note: relationships significant at 0.05 level are shaded in green

### Migrant countries of origin and usage of digital technologies

As highlighted previously, it is difficult to draw any firm conclusions about the influence of country of origin on the ways in which migrants use digital tech. This is mainly because all of the IMJA-facilitated respondents were from Haiti, and the majority (80%) of IOM respondents were from Venezuela;<sup>36</sup> there were insufficient responses from other countries in the samples to be able to explore the significance of any such wider relationships in detail. Moreover, whilst it is tempting to suggest that differences between responses to the online survey facilitated by IOM and the interviewer-completed IMJA-facilitated survey do indeed reflect differences between the views and practices of mainly Venezuelan for the former and Haitian for the latter, the possibility that they were also influenced by the different methods used cannot be ignored.

<sup>33</sup> Sample size of only 49 responses means that many cells had very few (often zero) responses in them, and  $\chi^2$  could not be used appropriately. These are indicated in the Table as “Sample too small”. The seven occupational categories and five temporal categories for frequency of use of Facebook, for example, gave 35 cells, with an average frequency of only 1.5 per cell if they were all distributed equally; 22 cells in this example had an observed frequency of zero.

<sup>34</sup> Although, where data are aggregated down to only 9 df,  $\chi^2 = 22.52$  which is higher than the critical value at  $p=0.05$  of 16.92 and could therefore be seen as significant. The main factor influencing this was the higher than expected number of part time formal sector workers who only rarely used digital tech before departure.

<sup>35</sup> Where data are aggregated down to only 3 df,  $\chi^2 = 3.53$  which remains lower than the critical value at 0.05 of 7.82.

<sup>36</sup> There were no respondents who were born in Haiti in the IOM-facilitated survey, and so it was impossible even to check whether there were similarities between just a few Haitians in that survey and the 100% of Haitians in the IMJA-facilitated one.

With this caveat in mind, there were indeed interesting differences between responses to the IOM- and IMJA-facilitated surveys as outlined in the previous sections which may well mean that:

- Venezuelan migrants emphasised that the costs of connectivity and devices were their main dislikes of digital tech, whereas that Haitian migrant highlighted their health risks and that it is easy to lose devices as dislikes.
- With respect to likes, interestingly the Haitian migrants placed much less emphasis on networking with people (3%), compared with the 16% of Venezuelan respondents who had this as one of their top three priorities.
- In terms of aspirations about what they would like to use digital tech for, much higher percentages of Venezuelans than Haitians aspired to use it for work related and educational purposes.
- Venezuelans were also much more likely to have used and know about digital tech before they migrated than was the case with Haitians.
- Age and gender also appeared to be more significantly associated with some aspects of digital tech use amongst Haitian than amongst Venezuelan migrants.

Overall, these findings suggest that the three different surveys may well have picked up three contrasting groups of migrants, each with rather varying experiences. Those in the INURED-facilitated survey appeared to have been mainly quite well established in their host countries, (mainly the USA), and had a good and diverse experience of using digital tech. The least experienced and knowledgeable were the Haitian migrants in Brazil (from the IMJA-facilitated survey) some of whom had rather little experience of using digital tech prior to migration. The Venezuelan migrants (from the IOM-facilitated survey) reflected something of a mid-point between these two extremes, with more digital knowledge and experience than those from Haiti in Brazil, but somewhat less than those in the INURED survey.

## Conclusions

This working paper has presented the results of three online surveys totalling 372 respondents, 55% of whom were women. More than 90% of respondents said that they were migrants living overseas. The INURED- and IMJA-facilitated samples were all migrants or their families from Haiti, whereas 80% of the IOM sample were from Venezuela. In general the longest established migrants overseas were those in the INURED survey (mainly in the USA), whereas the Venezuelans were the most recent (53% less than 5 years), and the Haitians in Brazil were in-between with 45% having been there more than 5 years. This has therefore provided an important opportunity to explore in some depth the extent to which different groups of migrants use digital technologies.

Only 4% said that they did not use digital technologies, with the majority of these saying that it was because they were expensive, or they are difficult to use. In all the surveys, more than 94% of the respondents said that they used smart phones and the Internet on a daily basis. Unsurprisingly, therefore, smart phones were the dominant device used for most purposes, although the INURED-facilitated survey did show a much wider use pattern of different technologies for varying purposes.

As with responses to our previous surveys, it was particularly interesting to discover that many of the purposes for which migrants aspired to use digital technologies (such as for education or business development) could already be satisfied through their devices if they had the knowledge of how to use them appropriately. Our original intention had been to try to identify specific needs that migrants perceived to be important to them and for which some kind of digital tech interventions (either hardware or software) could be developed. However, these findings instead have suggested that what is really needed is better training in safe, secure and

private means through which migrants can better use the devices that they already have but to achieve different outcomes.

As with our other surveys, there appears to be an increase in frequency of use of digital tech from the stage of deciding to migrate to working in their new locations. However, interestingly digital tech plays a much lesser role in deciding on whether to return home, or indeed in use once and if they return home. It is also pertinent to note that the Venezuelan migrants had much higher usage of digital tech in their home countries prior to migration than had the Haitians. This can in part be explained by the much higher GDP per capita and relative performance in other education, social and economic indicators in Venezuela compared with those in Haiti.

The overwhelming dominance of mobile phones and the Internet in the lives of most migrant respondents makes it difficult to detect subtleties in the influence of particular socio-economic factors on the uses of digital tech, but our exploratory data analysis nevertheless suggests four further main conclusions about significant relationships that are apparent within them:

- Gender and age did not seem to be a particularly strong determinant of digital tech use, although some detailed differences could be noted, as with the observation that Haitian women appear to have used desktop computers less than would have been the case if they were evenly distributed.
- Likewise there is some evidence, particularly in the INURED-facilitated survey that those in full time work were more likely to use a diversity of different types of digital tech than were those who were unemployed or in part-time work.
- In terms of app use, the most popular apps were generally from US companies, and included Meta's portfolio of WhatsApp, Facebook and Messenger.
- The likes and dislikes of digital tech differed a bit between samples, although their ease for finding things out and networking with people were common as likes across the three surveys. Dislikes were more varied between the samples, but costs of connectivity and devices, potential health risks and the ease with which devices could be lost were all commented on prominently in one or more of the surveys.

Finally, four further more general conclusions can be drawn. First, as in our other surveys it is very clear that *most migrants do not use digital tech that is specifically designed for them*. A clear conclusion for our future work is therefore that we should not seek to design a new piece of technology for migrants, but should instead concentrate on finding out how migrants can better use existing technologies to achieve their aspirations.

Second, it cannot be reiterated too often that *context matters*. It is evident that despite some similarities in usage, different groups of migrants across the countries that we have surveyed use and aspire to use digital tech in very varied ways. Despite many practitioners claiming otherwise, we find little firm evidence that "one size fits all".

Third, there is a distinct lack of skills among migrants in the wise, safe and secure use of digital tech. As indicated in the sub-section on dislikes, almost half of the respondents across the surveys as a whole expressed concerns about safety and security. Moreover, many of the things for which migrants and their families aspire to use digital tech can already be done by migrants if they know how. It is therefore incumbent on those working with migrants on digital tech initiatives to help them understand that tech is more than just Facebook or WhatsApp, and that what is needed most is basic training in how to use existing tech, perhaps in new ways, to deliver what they want.

Finally, it is striking to note that although the core focus of our research is to help migrants and people in the tech sector to craft together interventions that might reduce the inequalities



associated with migration, ideas around the principles of equality and equity never featured in responses to our survey questions. Instead, migrants seem to be concentrating on increasing their economic well-being through digital tech use during the migration process. That might well ultimately lead to some equalisation in their home societies as migrant remittances can be used to contribute to community development back home. However, it is equally plausible to suggest that digital tech will instead be used more to advantage some already privileged groups in society at the expense of others.

We welcome comment from readers on these provisional findings and also on ways of working together in the future on these issues to help migrants engage in the development of digital interventions that can indeed improve their lives.

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